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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/966,557	09/27/2001	Richard Charles Allen	55871US002	4597

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EXAMINER	
CURTIS, CRAIG	
ART UNIT	**PAPER NUMBER**
2872	

DATE MAILED: 11/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/966,557	ALLEN ET AL.	
	Examiner	Art Unit	
	Craig Curtis	2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 August 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *8/20/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Detailed Action

Disposition of the Instant Application

- This Office Action is responsive to Applicants' Amendment filed on 17 August 2004.
- By this amendment, Applicants have amended claims 1, 18, 21, and 25.
- Claims 1-26 are presently pending in the instant application.

Objections to Amendment

1. The amendment to the claims filed on 17 August 2004 does not comply with the requirements of 37 CFR 1.121(c) because although only claims 1, 18, 21, and 25 have been amended by the current amendment, claims 10 and 12--each of which had been amended in the previous amendment to include the limitation "...different from the liquid crystal material"--this limitation remains underlined in each of these claims. This presents an inconsistency in light of the presently recited status identifier correctly associated with each of these previously amended claims: namely, (previously amended). Amendments to the claims filed on or after July 30, 2003 must comply with 37 CFR 1.121(c), which states:

(c) ***Claims.*** Amendments to a claim must be made by rewriting the entire claim with all changes (*e.g.*, additions and deletions) as indicated in this subsection, except when the claim is being canceled. Each amendment document that includes a change to an existing claim, cancellation of an existing claim or addition of a new claim, must include a complete listing of all claims ever presented, including the text of all pending and withdrawn claims, in the application. The claim listing, including the text of the claims, in the amendment document will serve to replace all prior versions of the claims, in the application. In the claim listing, the status of every claim must be indicated after its claim number by using one of the following identifiers in a parenthetical expression: (Original), (Currently amended), (Canceled), (Withdrawn), (Previously presented), (New), and (Not entered).

(1) ***Claim listing.*** All of the claims presented in a claim listing shall be presented in ascending

numerical order. Consecutive claims having the same status of "canceled" or "not entered" may be aggregated into one statement (*e.g.*, Claims 1–5 (canceled)). The claim listing shall commence on a separate sheet of the amendment document and the sheet(s) that contain the text of any part of the claims shall not contain any other part of the amendment.

(2) ***When claim text with markings is required.*** All claims being currently amended in an amendment paper shall be presented in the claim listing, indicate a status of "currently amended," and be submitted with markings to indicate the changes that have been made relative to the immediate prior version of the claims. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter must be shown by strike-through except that double brackets placed before and after the deleted characters may be used to show deletion of five or fewer consecutive characters. The text of any deleted subject matter must be shown by being placed within double brackets if strike-through cannot be easily perceived. Only claims having the status of "currently amended," or "withdrawn" if also being amended, shall include markings. If a withdrawn claim is currently amended, its status in the claim listing may be identified as "withdrawn—currently amended."

(3) ***When claim text in clean version is required.*** The text of all pending claims not being currently amended shall be presented in the claim listing in clean version, *i.e.*, without any markings in the presentation of text. The presentation of a clean version of any claim having the status of "original," "withdrawn" or "previously presented" will constitute an assertion that it has not been changed relative to the immediate prior version, except to omit markings that may have been present in the immediate prior version of the claims of the status of "withdrawn" or "previously presented." Any claim added by amendment must be indicated with the status of "new" and presented in clean version, *i.e.*, without any underlining.

(4) ***When claim text shall not be presented; canceling a claim.***

(i) No claim text shall be presented for any claim in the claim listing with the status of "canceled" or "not entered."

(ii) Cancellation of a claim shall be effected by an instruction to cancel a particular claim number. Identifying the status of a claim in the claim listing as "canceled" will constitute an instruction to cancel the claim.

(5) ***Reinstatement of previously canceled claim.*** A claim that was previously canceled may be reinstated only by adding the claim as a "new" claim with a new claim number.

2. In addition, Applicants are respectfully apprised that the first page of the amendment filed via facsimile transmission on 17 August 2004 is skewed; specifically, the text, although still legible, experienced a change in appearance; still more specifically, the spacing between the lines of text has been compressed in the vertical direction (see, e.g., claims 1-5 on page 2 of the

amendment, which corresponds to page 3 of said facsimile transmission); and, compared with the correct font size (12 pt.) of the text of claims 6-26, the font size of claims 1-5 has undergone demagnification in both the vertical and horizontal directions. Please correct the above-referenced matters in the response to this Office Action.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-4, 6-12, and 18-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shingaki et al. (EP 0487047 A2) in view of Bailey (2,285,792).

Shingaki et al. disclose (see Fig. 1) the invention as claimed: said invention comprising, inter alia, a polarizing element, as well as, implicitly, a method of polarizing light--including wherein said polarizer element (1) has a polarization axis (inherent), wherein said polarizer element preferentially transmits light having a polarization that is parallel to said polarization axis (implicit); and

a separate polarization rotator element (5) and configured and arranged to rotate the polarization of at least a portion of the light that is transmitted by the polarizer element by an angle of at least 5 degrees (col. 5, ll. 5-10); wherein said polarizer element is a first polarizer element, said invention further comprising a second polarizer element (3) having a polarization axis that differs from the polarization axis of the first polarizer element by at least 5 degrees (col. 6, ll. 23-27) and

wherein said polarization rotator element is disposed between said first and second polarizer elements (see Fig. 1); wherein said polarization rotator element is configured and arranged to rotate the polarization of at least a portion of the light transmitted by the first polarizer element to within 5 degrees of the polarization axis of the second polarizer element (implicit); wherein the polarization rotator element further comprises a light absorbing material different from said liquid crystal material (e.g., rotator 5 is not a liquid crystal material) and is configured and arranged to rotate the polarization of at least a portion of the light transmitted by the first polarizer element to the polarization axis of the second polarizer element (again, inherent); further comprising an alignment layer disposed between the polarizer element and the polarization rotator element (col. 1, ll. 26-32), alignment layers comprising polymeric material that has been photoaligned being well-known in the art; either surface of the polarizer element facilitates (by orientation alone) alignment of said polarization rotator element--**EXCEPT FOR** an explicit teaching wherein said polarizer element and the separate polarization rotation element are integrated to form a single film.

Bailey, however, discloses an apparatus and, by straight-forward extension of same, a method of polarizing light in which a polarizer element (3) and a separate polarization rotation element (4) are integrated to form a single film. See, e.g., Figs. 1-3. (**N.B. Bailey** has been asserted solely for its teaching of a polarizer element and a separate polarization rotation element being integrated to form a single film (cf. Fig. 2 of the instant invention and Figs. 1-3 of Bailey), the recited order of these elements having already been satisfied by the **Shingaki et al.** primary reference.)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the apparatus and implicit method teachings of **Shingaki et al.** such that said

apparatus and method be constituted in the form of a film, as motivated by the explicit teachings of same provided by **Bailey**, for at least the purpose of realizing said apparatus in a more compact volume than would be the possible if said elements comprising said apparatus and constituting said method were disposed separately with respect to one another. In addition, integrating said polarizer element and said separate polarization rotation element taught by **Shingaki et al.** to form a single film would have been obvious to one having ordinary skill in the art at the time the invention was made, for at least the purpose of realizing said apparatus in a more compact volume than would be the possible if said elements comprising said apparatus and constituting said method were disposed separately with respect to one another, because it has been held that forming in one piece an article that has formerly been formed in two or more pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893).

4. Claims 16 & 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shingaki et al. (EP 0487047 A2) in view of Bailey (2,285,792).

The combination discloses the invention as claimed **EXCEPT FOR** explicit teachings wherein:

the polarization rotator element rotates the polarization of the portion of the light that is transmitted by the polarizer element by an angle in the range of 40 to 50 degrees; or by an angle in the range of 85 to 95 degrees. Rotation of polarization of light by angles in these ranges, however, is disclosed in the prior art. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the invention such that its polarization rotator element rotate the polarization of the portion of the light that is transmitted by the polarizer element by an

angle in the range of 40 to 50 degrees or 85 to 95 degrees, such teaching being well-known in the optical art, for at least the purpose of optimizing contrast properties of light or other characteristics associated with said invention, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

5. Claims 5 & 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shingaki et al. (EP 0487047 A2) in view of Bailey (2,285,792), as applied above with respect to, inter alia, claim 1, and further in view of Hansen et al. (5,986,730).

The combination discloses the claimed invention as set forth above **EXCEPT FOR** explicit teachings wherein: said first polarizer element comprises a reflective polarizer and the second polarizer element comprises an absorbing polarizer; wherein said polarizer element of claim 1 comprises either a reflective polarizer (as recited in claim 13), an absorbing polarizer (as recited in claim 14), or a reflective polarizer and an absorbing polarizer (as recited in claim 15). Applicants are hereby apprised that criticality has not been associated with any one of these teachings with respect to the others (i.e., said polarizer element comprising a reflective polarizer vs. its comprising an absorbing polarizer vs. its comprising a reflective polarizer *and* an absorbing polarizer (emphasis added)).

Hansen et al., however, disclose an absorptive polarizer as one example of a polarizing means and, further, provide an explicit teaching wherein [a]ny means for polarizing the light so that light having mostly one polarization orientation is passed may be used. Col. 7, ll. 23. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the invention of the combination such that its polarizers (first or first and second) variously comprise,

individually or in combination, reflective and absorptive polarizers, as taught by **Hansen et al.**, for at least the purpose of achieving a desired polarization state for light traversing said invention.

Response to Arguments

6. Applicants' arguments filed on 17 August 2004 with respect to the claims have been fully considered but are moot in view of the new ground(s) of rejection set forth hereinbefore.

Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Craig Curtis, whose telephone number is (571) 272-2311. The examiner can normally be reached on Monday-Friday, 9:00 A.M. to 6:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew A. Dunn, can be reached at (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C.H.C.
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10 November 2004

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